SKU 430
UVB Sensor

Skye Instruments Ltd have been designing and manufacturing quality, fully calibrated light sensors since 1983.

Skye offer sensors to measure light levels in the Ultraviolet A and Ultraviolet B wavebands. The wavelengths used in these sensors are according to DIN 5031 part 7. This leaflet describes the UVB sensor.

The dimensions and overall look of these sensors are similar to that of our other sensors. The housing is black aluminium and sealed to IP68 standards, making them suitable for underwater use.

Skye guarantees sensors to a depth of 4 metres. The light collecting head utilises a UV stable polymer and is cosine corrected. The sensors have been designed with an integral amplifier to give a voltage output for use with most dataloggers, computers, PLCs, etc.

All sensors are calibrated against a reference light source which is directly traceable to NPL and each sensor is issued with a calibration certificate.

Climatology, meteorology
UV effects on ecosystems
Marine biology, ecology, zoology
Studies of plant/animal responses to rising UV levels
To monitor exposure of test samples in natural and other UV sources

SKU 430 SPECIFICATIONS

Construction - Anodised black aluminium, sealed to IP68. Submersible to 4m

Cable - Screened. 7-14-C military specification.

Sensor - Cosine corrected head. Specially formulated diffuser.

Detector - SiC Photodetector

Spectral Response **(1)** - 280nm - 315nm

Working Range **(2)** - 0-10 W/m²

Output Signal - 0-1V

Sensitivity - 150 mV / W/m²

Linearity (0-1V with 9V power supply) - Better than 1%

Thermal Drift of Output (-20 to +50°C) - 0.075mV/°C max

Zero Offset Range (each sensor is individually calibrated) - +/- 1mV

Thermal Drift of Zero Offset (-20 to +50°C) - Typically 0.03 mV/°C

Output Impedance - 500Ω

Power Supply - 5-15VDC

Absolute calibration error **(3)** - typ. <3%, 5% max

Cosine error **(4)** - 3%

Azimuth error **(5)** - < 1%

Longterm stability **(6)** - +/-2%

Response time (7) - better than 10ms

Temperature coefficient - +/-2%

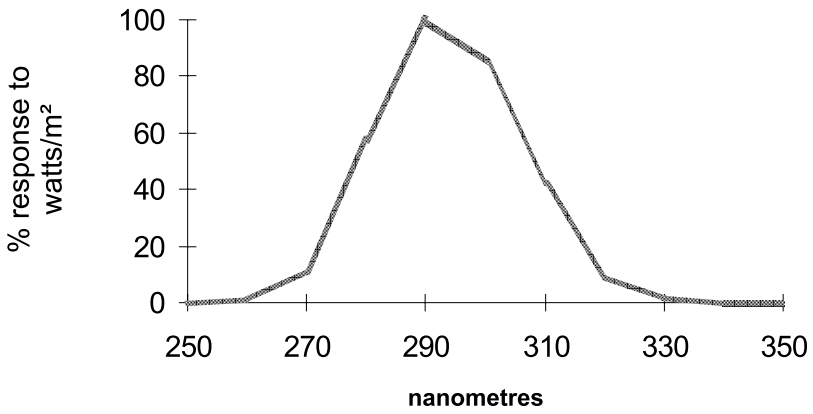
Weight - 200g (with 3m cable)

Temperature range - -30 to +60°C

Humidity range - 0-100% RH

Dimensions -

UV-B SKU 430



NOTES ON SPECIFICATIONS

(1) FWHM or 50% transmission
(2) All Skye sensors will work at levels of irradiance well above that found in terrestrial sunlight conditions, room or growth chamber lighting
(3) Main source of this error is uncertainty of calibration of Reference Lamp. Skye calibration standards are directly traceable to N.P.L. standard references.
(4) Cosine error to 80° is typically 5% max. Figures shown are for normal use sources, e.g., sun plus sky, diffuse sun, growth chambers, etc.
(5) Measured at 45° elevation over 360°
(6) Maximum change in one year. Calibration check recommended at least every two years. Experience has shown that changes are typically much less than figures quoted
(7) Times are generally less than the figure quoted, which is in nanoseconds. They may be slightly increased if long leads are fitted, or those of a higher capacity cable

ORDERING INFOMATION

Sensors:

SKU 430	UVB sensor with 3m cable
SKU 430/1	UVB sensor with 3m cable and DataHog connector
SKU 430/SS2	UVB sensor with 2m cable and SpectroSense2 connector

Accessories: (see separate datasheet)

SKM 221	Levelling unit
SKM 226	Long arm pole/wall mount

Meters and dataloggers: (see separate datasheet)

SKL 904	SpectroSense2 4-channel display meter
SKL 908	SpectroSense2+ 8-channel logging meter
SDL 5000	DataHog2 logger range

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